

FEDOROV A.A.

AUTHORS: Sokolov, M. M. , Ochkur, A. P. , Fedorov, A. A. ,  
Karabanov, N. I. 89-3-8/30

TITLE: The Photo-Electric Absorption of Scattered  $\gamma$ -Rays (Foto-  
elektricheskoye pogloshcheniye rasseyannogo  $\gamma$ -izlucheniya)

PERIODICAL: Atomnaya Energiya, 1958, Vol. 4, Nr 3, pp. 284 - 285 (USSR)

ABSTRACT: The measurement of the  $\gamma$ -spectrum was carried out by means  
of a scintillation spectrometer to which a multichannel  
pulse analyzer was connected. As  $\gamma$ -radiator Tl-204, Hg-203,  
Cr-51, Cs-137 and Zn-65 were used, and the distance between  
the detector and the radiator was varied between 5 and 15 cm.  
For the case Cr-51, D = 10 cm, and with sand as scattering  
material, which once contained 0,5 %, then 2 %, 5 % of lead  
and 10 % of copper the measured scattering spectrum is graphi-  
cally represented.  
At about 100 KeV a minimum can be observed in the  $\gamma$ -spectrum  
which coincides with theoretical calculations. Within the  
range of about 150 KeV a more marked decrease is to be seen  
which corresponds to the single scattering of  $\gamma$ -quanta

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The Photo-Electric Absorption of Scattered  $\gamma$ -Rays

89-3-8/30

with minimum energy. In theoretical calculation this energy turns out to be 145 KeV.

The admixtures of lead considerably change the spectrum, not only decreasing the number of pulses but causing a depression which is to be seen within the range of 100 KeV, being dependent on the greatly increased photo-electric absorption coefficient for the  $\gamma$ -radiation, the energy of which approaches that of the K-binding energy of lead (88,2 KeV). Analogous pictures are given by all radiators investigated. There is 1 figure.

SUBMITTED: July 22, 1957

AVAILABLE: Library of Congress

1. Scattered  $\gamma$ -Rays-Photoelectric absorption
2.  $\gamma$ -Spectrum-Measurement
3. Scintillation spectrometers-Applications

Card 2/2

FOK, V.A.; FEDOROV, A.A.

Diffraction of a plane electromagnetic wave on an ideally conducting paraboloid of revolution. Zhur. tekhn. fiz. 28 no.11:

2548-2566 N '58.

(MIRA 12:1)

(Electric waves)

5.5500

S/089/60/008/06/10/021  
B006/B063 82311

AUTHORS: Fedorov, A. A., Sokolov, M. M., Ochkur, A. P.

TITLE: Measurement of the  $\gamma$ -Emission Spectra of Radiative Neutron Capture in Certain Rocks

PERIODICAL: Atomnaya energiya, 1960, Vol. 8, No. 6, pp. 555-556

TEXT: The gamma lines emitted by various nuclei as a result of their absorption of thermal neutrons are characteristic of these nuclei. An examination of this gamma spectrum makes it possible to analyze complex chemical compositions. The authors used this method for the first time in 1956 when they detected certain chemical elements in rock specimens. (Po+Be) with  $2.10^6$ n/sec served as neutron source, and the gamma radiation was recorded by a scintillation spectrometer whose resolution was 12% for the gamma line of  $\text{Cs}^{137}$  (0.66 Mev). The experimental arrangement is briefly described. Fig. 1 shows a pulse-height spectrum corresponding to the gamma radiation that occurs in neutron bombardment

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X

Measurement of the  $\gamma$ -Emission Spectra of  
Radiative Neutron Capture in Certain Rocks

S/089/60/008/06/10/021  
B006/B063 82311

of hornstone (Curve 1) and diorite (Curve 2). The former is mainly composed of silicon and oxygen, the latter of oxygen, silicon, sodium, calcium, aluminum, and iron. The capture cross sections of the thermal neutrons and the main gamma lines ( $E_\gamma > 4.5$  Mev) of these elements are listed in a Table. As practically no neutrons are absorbed by oxygen, only the Si line (4.95 Mev) occurs in the 5-Mev region. Diorite exhibits additional maxima at 6.4 Mev (Na, Ca) and 7.6 Mev (Al, Fe). The elements may be distinguished by continuous recording of the intensity of  $\gamma$ -radiation. Fig. 2 shows core sampling diagrams which are briefly described. There are 2 figures, 1 table, and 3 references: 1 Soviet and 1 Canadian.

SUBMITTED: December 12, 1958

4

Card 2/2

9,3700 (1103, 1127, 1036)  
9,9300

21428  
S/109/61/006/001/005/023  
E032/E114

AUTHORS: Vaynshteyn, L.A., and Fedorov, A.A.

TITLE: Scattering of plane and cylindrical waves by an elliptical cylinder and the concept of diffraction rays

PERIODICAL: Radiotekhnika i elektronika, Vol.6, No.1, 1961, pp. 31-46

TEXT: The present state of the theory of diffraction of electromagnetic waves by convex conducting bodies is largely based on the papers of V.A. Fok (Refs.1-7). These papers introduced special functions (attenuation coefficients) which determine the diffraction field for different dispositions of the source and the point of observation. To start with, these functions refer to the "half-shadow" region. In the illuminated region they go over into the formulae of geometrical optics and have been extended to all points for the case of a sphere (Belkina and Vaynshteyn, Ref.9, and Fedorov, Ref.10) and a circular cylinder (Goryainov, Ref.11). However, it is stated that the generalisation of the various formulae to a surface with a variable curvature is not obvious. This generalisation has been carried out by J.B. Keller (Ref.12)

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S/109/61/006/001/005/023

E032/E114

Scattering of plane and cylindrical waves by an elliptical cylinder and the concept of diffraction rays

in the case of two-dimensional problems. Keller introduced the concept of diffraction rays which have curvilinear sections lying on the surface of the body and represent waves which have experienced diffraction in the normal sense of the term. On this basis the total field can be represented as a sum of contributions due to ordinary rays obeying the laws of geometrical optics and the above diffraction rays. The present authors emphasise that the concept of diffraction rays is still not completely justified from the theoretical point of view. It is simply a device for obtaining a physical interpretation and a short formulation of the asymptotic laws of diffraction for a certain class of problems. In the present paper the authors derive the asymptotic solution for the diffraction by a convex cylinder with variable surface curvature and the cylinder is then used to give a theoretical foundation for the concept of diffraction rays. The cylinder is taken in the form of an elliptical cylinder and the discussion is specialised to two-dimensional fields and simple boundary

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Scattering of plane and cylindrical..E032/E114

conditions. In particular, the diffraction of cylindrical and plane waves by a perfectly reflecting elliptical cylinder is discussed, assuming that the transverse dimensions and radii of curvature of the cylinder are large in comparison with the wavelength. The exact solution of the problem is obtained in the form of a series and a contour integral. When the asymptotic expressions for the radial and angular functions of the elliptical cylinder are substituted into the solution, one obtains the special functions introduced by V.A. Fok. The asymptotic solution obtained in this way corresponds to the concept of diffraction rays of J.B. Keller (Ref.12). There are 2 figures and 16 references: 14 Soviet and 2 non-Soviet.

SUBMITTED: May 3, 1960

Card 3/3



KIZEVETTER, Ye.N.; KLEYN, P.N.; KHARCHEV, M.K. [deceased];  
VOLOBRINSKIY, S.D.; GRODSKIY, S.Ye.; YERMILOV, A.A.;  
KAYALOV, G.M.; LIVSHITS, D.S.; MAKSIMOV, A.A.; MESHEL',  
B.S.; MUKOSEYEV, Yu.L.; OGORODNOV, S.I.; ROZENBERG, V.A.;  
SHRAYBER, L.G.; ZALESSKIY, Yu.Ye., retsenzent; IOKHVIDOV,  
E.S., retsenzent; FEDOROV, A.A., retsenzent; SAVEL'YEV,  
V.I., red.; LARIONOV, G.Ye., tekhn. red.

[Temporary instructions for determining the electrical loads  
of industrial enterprises] Vremennye rukovodiashchie ukaza-  
niia po opredeleniiu elektricheskikh nagruzok promyshlennykh  
predpriatii. Moskva, Gosenergoizdat, 1962. 45 p.

(MIRA 16:2)

1. Russia (1923- U.S.S.R.) Glavnoye energeticheskoye uprav-  
leniye. 2. Leningradskoye otdeleniye Gosudarstvennogo pro-  
yektного instituta tyazheloy promyshlennosti (for Kizevetter,  
Kleyn, Kharchev). 3. Komissiya po elektricheskim nagruskam  
Nauchno-tekhnicheskogo obshchestva energeticheskoy promyshlen-  
nosti (for Volobriniski, Grodskiy, Yermilov, Kayalov, Livshits,  
Maksimov, Meshel, Mukoseyev, Ogorodnov, Rozenberg, Shrayber).  
(Electric power distribution)

GREYSUKH, M.V.; YERMILOV, A.A.; ZALESSKIY, Yu.Ye.; KAZYMOV, A.A.;  
KATSEVICH, L.S.; KIRPA, I.I.; KIREYEV, M.I.; KNYAZEVSKIY,  
B.A.; KOFMAN, K.D.; KRZHAVANIK, L.V.; KUZNETSOV, P.V.;  
MOROZOV, K.S.; RAKOVICH, I.I.; RYABOV, M.S.; SVENCHANSKIY,  
A.D.; SOKOLOV, M.M.; SYCHEV, L.I.; TVERDIN, L.M.; KHEYFITS,  
M.E.; SHULIMOV, Ye.V.; EPSHTEYN, L.M.; SHCHEGOL'KOV, Ye.I.;  
TSAPENKO, Ye.F.; FEDOROV, A.A., glav. red.; SERBINOVSKIY, G.V.,  
red.; BOL'SHAM, Ya.M., red.; BRANDENBURGSKAYA, E.Ya., red.;  
TVERDIN, L.M., red.; FRIDKIN, L.M., tekhn. red.

[Handbook for power engineers of industrial enterprises in  
four volumes] Spravochnik energetika promyshlennykh pred-  
priyatii v chetyrekh tomakh. Moskva, Gosenergoizdat.  
Vol.2. [Electric-power supply (conclusion), use of electric  
power and electrical equipment in some branches of industry]  
Elektrosnabzhenie (okonchanie), priemniki elektroenergii i  
elektrooborudovanie nekotorykh otraslei promyshlennosti. Pod  
obshchei red. A.A.Fedorova (glav. red.), G.V.Serbinovskogo i  
I.A.M.Bol'shama. 1963. 880 p. (MIRA 16:7)

(Power engineering—Handbooks, manuals, etc.)  
(Electric power distribution)

ZHUKOVSKIY, P.M., otv. red.; TROSHIN, A.S., otv. red.; ASTAUROV, B.L., red.; ZHINKIN, L.N., red.; MATVEYEVA, T.S., red.; SAKHAROV, V.V., red.; FEDOROV, A.A., red.; CHUKSANOVA, N.A., red.

[Polyploidy and breeding; transactions] Poliploidia i selektsiia; trudy. Moskva, Nauka, 1965. 322 p.

(MIRA 18:6)

1. Soveshchaniye po poliploidii, 1963. 2. Daystvitel'nyy chlen Vsesoyuznoy akademii sel'skokhozyaystvennykh nauk imeni V.I.Lenina (for Zhukovskiy). 3. Chlen-korrespondent AN SSSR (for all except Zhukovskiy).

L 20806-66 EWP(j)/EWT(m)/ETC(m)-6/T IJP(c) RM/WW

ACC NR: AP6005945

(A)

SOURCE CODE: UR/0191/66/000/002/0010/0011

AUTHORS: Kirilovich, V. I.; Rubtsova, I. K.; Pokrovskiy, L. I.; Khinich, R. V.;  
Fedorov, A. A.

ORG: none

TITLE: Synthesis of phosphor-containing polyesters and their application in  
preparation of fireproof polyurethane foams 57 B

SOURCE: Plasticheskiye massy, no. 2, 1966, 10-11

TOPIC TAGS: polyester plastic, polyurethane, foam plastic, fire resistant  
material, phosphorous acid, esterification

ABSTRACT: Polytransesterification of dimethylphosphorous acid (I) with polyols  
(pentaerythritol, trimethylolpropane, trimethylolethane) or of mixed polyols  
and diols in various ratios, has been investigated. This work is a continuation  
of a study of polyphosphite synthesis by V. I. Kirilovich, I. K. Rubtsova, and  
Ye. L. Geftor (Plast. massy, No. 7, 20, 1963), and was undertaken to test the  
suitability of polyesters in imparting fire-resistant properties to polyurethane  
foams. Reaction of the mixture of diols and polyols with I yields polyesters

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UDC: 678.664-496:678.029.65

L 20806-66

ACC NR: AP6005945

having viscosities similar to those of the polyurethane foams, i.e.,  $\eta^{25C} \leq 1000$  poise. The optimal ratio of viscosity and free hydroxyl groups in polyphosphites occurs with pentaerythritol:hexane-diol = 0.3:0.7 and pentaerythritol:diethylene glycol = 0.2:0.8. Of all polyphosphites obtained with individual polyols, poly-trimethylolpropane phosphite had the most acceptable viscosity. The use of metallic sodium as a catalyst permitted lowering of the initial reaction temperature, thus preventing excessive rise of the viscosity of the product. The resulting phosphor-containing polyurethane foams were self-extinguishing and thermally stable. Orig. art. has: 3 tables.

SUB CODE: 11/ SUBM DATE: none/ ORIG REF: 008

Card 2/2

FEDOROV, A.A.

Conducting practical studies in mathematics in institutes of higher  
education. Uch zap. Ped inst Gerts. 197:280-292 '58. (MIRA 16:9)  
(Mathematics—Study and teaching)

STEPIN, Vasil'y Vasil'yevich; SILAYEVA, Yelizaveta Vasil'yevna;  
PLISS, Anastasiya Mikhaylovna; KURBATOVA, Vera Ivanovna;  
KRYUCHKOVA, Lidiya Merkur'yevna; PONOSOV, Vladimir Il'ich;  
DYMOV, A.M., doktor khim. nauk, prof., red.; FEDOROV, A.A.,  
st. nauchn. sotr., red.; TKACHENKO, N.S., inzh., red.;  
DOBRZHANSKIY, A.V., st. inzh., red.; LEVIT, Ye.I., red. izd-  
va; ISLENT'YEVA, P.G., tekhn. red.

[Analysis of ferrous metals, alloys and manganese ores] Ana-  
liz chernykh metallov, splavov i margantsevykh rud. [By] V.V.  
Stepin i dr. Moskva, Metallurgizdat, 1964. 498 p.

(MIRA 17:3)

1. Tsentral'nyy nauchno-issledovatel'skiy institut chernoy  
metallurgii (for Dymov, Fedorov, Tkachenko, Dobrzhanskiy).

FEDOROV, A.A.; RODIONOVA, N.S.

Thermogravimetric study of the collecting agent  
 $(\text{MnO}_2)_x(\text{Fe}_2\text{O}_3)_y(\text{H}_2\text{O})_2$  used in separation of phosphorus.  
Zhur. anal.khim. 18 no.12:1504-1506 D '63. (MIRA 17:4)

1. Institut geokhimii i analiticheskoy khimii imeni Vernadskogo  
AN SSSR, Moskva.



FEDOROV, A.A.

Asymptotic diffraction formulas for a sphere with random placement of the source and observation point. Radiotekh. i elektron. 9 no.9:1702-1706 S '64. (MIRA 17:10)

21

S

**Determination of Titanium, Niobium and Zirconium in Alloy Steels.** A. A. Priloge, (Zavodskaya Laboratoriya, 1930, No. 8, pp. 807-809). (In Russian). The "Steelscope" spectrometer, the conditions and suitable lines for the determination of titanium, niobium and zirconium in alloy steels are described.

ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION

FROM THE	ISSUED HAS ONE OF	CLASSIFYING
140385-64	140385-64	140385-64

**Determination of titanium, columbium and zirconium in steel alloys by means of a steelscope at the plant "electrostal."** A. Fedurav. *Bull. acad. sci. U. R. S. S., Ser. phys.* 4, 212-15(1940).—A semiquant. method of analyzing steel alloys for Ti, Cb and Zr by means of a steelscope is developed. In order to find the convenient spectral lines for the analysis, the region of spectra from 4200 to 6100 Å. was investigated. A no. of lines were found suitable for different percentages of the elements studied.  
Rokosana Gornow



PROCESSING AND PROPERTIES INDEX																									
1ST AND 2ND ORDERS													3RD AND 4TH ORDERS												
<p>CA</p> <p>Preparing rubidium and cesium by reducing their chlorides. V. D. Polyakov and A. A. Fedyukin. <i>J. Appl. Chem. (U. S. S. R.)</i> 13, 1813-1814 (1940). Mixture of RbCl or CsCl with CaC<sub>2</sub> heated to 700-800° in <i>vacuo</i> gave 70% yields of the alkali metal, which was collected in a glass receiver. The app. is described and illustrated.</p> <p>A. A. Buchtinger</p>																									
<p>ASO-51A METALLURGICAL LITERATURE CLASSIFICATION</p>																									
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CA

7

A rapid method for the determination of the hygroscopic moisture in molding materials. A. A. Fokurov. *Zashchita* Lab. 10, No. 1, 00(1041); *Chem. Zvesti.* 1943, 1, 1914. —In connection with the method of Kugel (cf. C. A. 32, 123P) the following procedure is recommended for such materials as coal, coke, graphite or slag: A sample (2 or 3 g.) of definite grain size is treated with 10 g. of  $\text{CaCl}_2$  and the increase in pressure due to the  $\text{CaH}_2$  evolved is measured. M. G. Moore

ASH-STA METALLURGICAL LITERATURE CLASSIFICATION

100000-110 000 000

100000-110 000 000

111 AND 112 ORDERS

PROCESSES AND PROPERTIES INDEX

*M*

**Energy Absorption in the Plastic Deformation of Metals as a Function of the Melting Point.** A. A. Fedorov. (Zhur. Tekhn. Fiziki, 1941, 11, (11), 809-1007).—(In Russian.) The absorption of energy in the plastic compression of copper, aluminium, tin, and lead was measured. It was found that metals of high melting point have a higher absorption energy than low-melting-point metals. With suitable relative compressions, 25% absorbed energy amounts to 10% of the total deformation energy for copper, 7-8 for aluminium, 1-4 for lead, and 1% for tin. An explanation from the point of view of the recovery of metals is given.—N. A.

ASB-51A METALLURGICAL LITERATURE CLASSIFICATION

111 AND 112 ORDERS

117 AND 120 (0010)		104 AND 105 (0100)	
PROCESSING AND PROPERTIES INDEX			
CA		<p>A rapid method for the determination of total water content in binding materials. A. A. Velozov, Zvezdskaya 11, 254-7(1945). - A modification of the Marshfield method (K. Anorg. Chem., 7, 22(1941)) is described in which a steel capsule is used instead of a glass tube and the escaping <math>H_2O</math>, obtained by heating in an electric furnace, is led through a condenser, collected in a buret, and measured.</p> <p>W. R. Henn</p>	
<p>104000 02</p> <p>104000 02 001 001</p>		<p>01000 001000</p> <p>01000 001 001 001</p>	
<p>104000 02</p> <p>104000 02 001 001</p>		<p>01000 001000</p> <p>01000 001 001 001</p>	



31729

S/081/61/000/021/030/094  
B101/B147

55300

AUTHORS: Fedorov, A. A., Ozerskaya, F. A., Malinina, R. D., Sokolova, Z. M., Linkova, F. V.

TITLE: Determination of manganese, iron, nickel, and lead contents in pure electrolytic chromium

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 21, 1961, 112, abstract 21D113 (Sb. tr. Tsentr. n.-i. in-t chernoy metallurgii, no. 19, 1960, 7 - 21)

TEXT: Methods for determining Mn, Fe, Ni, and Pb in highly pure electrolytic chromium have been developed. Mn determination is based on removing Cr from perchloro acid solution as  $\text{CrO}_2\text{Cl}_2$  and photometrically determining the violet color of  $\text{MnO}_4^-$  forming after oxidation of manganese by means of periodate. 0.5 g (0.02 - 0.04% Mn) or 1g (0.001 - 0.02% Mn) of chromium is dissolved in 30 milliliters (ml) of concentrated HCl and 30 ml of  $\text{HClO}_4$  (specific gravity 1.67). The solution is evaporated, concentrated HCl is added, and the substance is heated until the

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B101/B147

Determination of manganese...

liberation of  $\text{CrO}_2\text{Cl}_2$  vapors has stopped. This process is repeated. The dry residue is dissolved in 5 ml of concentrated HCl, 15 ml of  $\text{H}_2\text{SO}_4$  (1:4) is added, and the substance is heated until white  $\text{H}_2\text{SO}_4$  fume has been formed. After cooling, the salt deposits are dissolved in a minimum amount of water, the solution is filtered, and evaporated to 15 - 20 ml. The residue is mixed with 1 ml of concentrated  $\text{H}_3\text{PO}_4$ , 20 ml of 2.5%  $\text{KIO}_4$  solution, boiled for 5 - 8 min, moderately heated for another 15 - 20 min, cooled, diluted with water to 50 ml, and photometrically measured with a green light filter in a 5-cm cuvette, a standard solution serving for comparison. For determining Fe (0.002 - 0.1%), 0.5 - 2 g of the sample is dissolved in  $\text{H}_2\text{SO}_4$  (1:4), the  $\text{Cr}^{3+}$  is oxidized with ammonium persulfate to  $\text{Cr}^{6+}$ , and iron and aluminum (as collector) are precipitated with  $\text{NH}_3$ . The precipitate is dissolved, and Fe photometrically determined with o-phenanthroline. Determination of Ni (0.001 - 0.1%) includes its separation from Cr by extracting the

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Determination of manganese...

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B101/B147

nickel dimethyl glyoximate with chloroform from weakly ammoniacal solution, re-extraction of Ni, and photometric determination with dimethyl glyoxime in alkaline medium in the presence of an oxidizing agent. For determining Pb, the latter is coprecipitated by means of  $H_2S$  with Cu (as collector).

After separation from Cu by precipitation (together with Fe) by means of  $NH_4OH$  solution, polarographic determination is performed in hydrochloric acid solution containing NaCl. The effect of atmospheric oxygen, Sb, Bi, Cu, and  $Fe^{3+}$  is eliminated by metallic iron reduced with hydrogen.

[Abstracter's note: Complete translation.]

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Card 3/3

FEDOROV, A. A.

PHASE I BOOK EXPLOITATION SOV/5592

Vsesoyuznoye soveshchaniye po vnedreniyu radioaktivnykh izotopov i yadernykh izlucheniya v narodnom khozyaystve SSSR. Riga, 1960.

Radioaktivnyye izotopy i yadernyye izlucheniya v narodnom khozyaystve SSSR; trudy Vsesoyuznogo soveshchaniya 12 - 16 aprelya 1960 g. G. Riga, v 4 tomakh. t. 4: Poiski, razvedka i razrabotka poleznykh iskopayemykh (Radioactive Isotopes and Nuclear Radiation in the National Economy of the USSR; Transactions on the Symposium Held in Riga, April 12 - 16, 1960, in 4 volumes. v. 4: Prospecting, Surveying, and Mining of Mineral Deposits) Moscow, Gostoptekhizdat, 1961. 284 p. 3,640 copies printed.

Sponsoring Agency: Gosudarstvennyy nauchno-tekhnicheskii komitet Soveta Ministrov SSSR. Gosudarstvennyy komitet Soveta Ministrov SSSR po ispol'zovaniyu atomnoy energii

Eds. (Title page): N. A. Petrov, L. I. Petrenko, and P. S. Savitskiy; ed. of this volume: M. A. Speranskiy; Scientific ed.: M. A. Speranskiy; Executive Eds.: N. N. Kuz'mina and A. G. Ionel';

Card 1/11

Radioactive Isotopes and Nuclear (Cont.)

SOV/5592

Tech. Ed.: A. S. Polosina.

PURPOSE : The book is intended for engineers and technicians dealing with the problems involved in the application of radioactive isotopes and nuclear radiation.

COVERAGE: This collection of 39 articles is Vol. 4 of the Transactions of the All-Union Conference of the Introduction of Radioactive Isotopes and Nuclear Reactions in the National Economy of the USSR. The Conference was called by the Gosudarstvennyy nauchno-tekhnicheskii komitet Sovet Ministrov SSSR (State Scientific-Technical Committee of the Council of Ministers of the USSR), Academy of Sciences USSR, Gosplan SSSR (State Planning Committee of the Council of Ministers of the USSR), Gosudarstvennyy komitet Soveta Ministrov SSSR po avtomatizatsii i mashinostroyeniyu (State Committee of the Council of Ministers of the USSR for Automation and Machine Building), and the Council of Ministers of the Latvian SSR. The reports summarized in this publication deal with the advantages, prospects, and

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Radioactive Isotopes and Nuclear (Cont.)

SOV/5592

development of radioactive methods used in prospecting, surveying, and mining of ores. Individual reports present the results of the latest scientific research on the development and improvement of the theory, methodology, and technology of radiometric investigations. Application of radioactive methods in the field of engineering geology, hydrology, and the control of ore enrichment processes is analyzed. No personalities are mentioned. There are no references.

TABLE OF CONTENTS:

Alekseyev, F. A. Present State and Future Prospects of Applying the Methods of Nuclear Geophysics in Prospecting, Surveying, and Mining of Minerals 5

Bulankevich, Yu. P., G. M. Voskoboynikov, and L. V. Muzyukin. Neutron and Gamma-Ray Logging at Ore and Coal Deposits 19

Gordeyev, Yu. I., A. A. Mukher, and D. M. Srebrcdol'skiy. The

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Radioactive Isotopes and Nuclear (Cont.)

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14

Problems

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Zolotov, A. V. Critical Dimensions of an Artificial Bed for the Simulation of Radioactive Methods of Borehole Investigation

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Sokolov, M. M., A. P. Ochkur, A. A. Fedorov, A. Yu. Bol'shakov, and P. P. Khitev. Application of the Method of Scattered Gamma Radiation for the Investigation of Ore Holes

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Mezhiborskaya, Kh. B. Radioactivation (Photoneutron) Method for Determining Beryllium

154

Yakubson, K. I. On the Possibility of Activation by Fast Neutrons Under Borehole Conditions

157

Sen'ko, A. K. Photoneutron Method of Prospecting, Exploration, and Sampling of Beryllium Ores

163

Abdullayev, A. A., Ye. M. Lobanov, A. P. Novikov, and A. A. Card 7/11

YAKOVLEV, Pavel Yakovlevich, kand. khim. nauk; FEDOROV, Aleksey Alekseyevich, inzh.; BUYANOV, Nikolay Vasil'yevich, kand. tekhn. nauk; DYMOV, A.M., dokt. khim. nauk, prof., retsenzent; SHEMYAKIN, F.M., dokt., khim. nauk, prof., retsenzent; KHARLAMOV, I.P., kand. tekhn. nauk, retsenzent; VENETSKIY, S.I., red. izd-va; KLEYMAN, M.R., tekhn. red.

[Analysis of data on metallurgical production; determination of microimpurities] Analiz materialov metallurgicheskogo proizvodstva; opredelenie mikroprimesei. Moskva, Gos. nauchno-tekhn. izd-vo lit-ry po chernoi i tsvetnoi metallurgii, 1961. 316 p. (MIRA 14:7)  
(Metals--Analysis)



S/032/61/027/002/002/026  
B134/B206

AUTHORS: Fedorov, A. A. and Ozerskaya, F. A.

TITLE: Determination of cerium in medium- and highly alloyed steels

PERIODICAL: Zavodskaya laboratoriya, v. 27, no. 2, 1961, 139-140

TEXT: The methods described in publications (Refs. 1-3) do not permit a quantitative cerium determination in the presence of certain alloyed elements. In the present case, the disturbing effect of other elements on the cerium determination was prevented by the cerium being precipitated as a fluoride and  $\text{CaF}_2$  being used as a collector. Since even small amounts of mineral acids impair this precipitation, it is recommended to dissolve the sample in hydrofluoric acid with addition of  $\text{H}_2\text{O}_2$ . The final determination of cerium is made colorimetrically (Ref. 4) by forming the complex compound  $\text{Na}_5[\text{Ce}(\text{C}_6\text{H}_5\text{O}_7)_3]$  by means of potassium citrate in alkaline medium beside  $\text{H}_2\text{O}_2$ . In order to prevent coagulation of this yellow-colored complex compound, a mixture of boric acid or glycerin with

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Determination of cerium ...

S/032/61/027/002/002/026  
B134/B206

Trilon B (Ref. 5) can be added. The method described was tested on steel samples to which certain amounts of a cerium nitrate standard solution were added. This cerium determination can also be made by the spectroscopic method. In this case, cerium is precipitated as a fluoride with the application of calcium as a collector, the precipitate being ignited at 450-500°C. The following deviations from the mean value for three parallel determinations of cerium in steel are mentioned as maximum: 0.005% at a content of 0.01-0.03% Ce; 0.007% at 0.03-0.06% Ce; 0.009% at 0.06-0.10% Ce. There are 1 table and 5 references: 4 Soviet-bloc and 1 non-Soviet-bloc. ✓

ASSOCIATION: Tsentral'nyy nauchno-issledovatel'skiy institut chernoy metallurgii im. I. P. Bardina  
(Central Scientific Research Institute of Ferrous Metallurgy imeni I. P. Bardin)

Card 2/2

S/032/61/027/012/001/015  
B145/B147

AUTHORS:

Fedorov, A. A., Krichevskaya, A. M., and Linkova, F. V.

TITLE:

Determination of sulfur in metallic chromium

PERIODICAL:

Zavodskaya laboratoriya, v. 27, no. 12, 1961, 1460 - 1462

TEXT: The method suggested is based on the formation of methylene blue from  $H_2S$  with dimethyl-p-phenylene diamine sulfate and trivalent iron in hydrochloric acid solution. It permits the determination of sulfur in metallic chromium within about 1.5 hr with an accuracy of  $1 \cdot 10^{-4}\%$ . The method can be used for the analysis of ferrochromium, Cr-Nb alloys, some types of steel, iron, cast iron, silicon, niobium, nitric, hydrochloric, and phosphoric acid salts of alkali metals, as well as bases and acids. Tungsten disturbs the analysis. Orthophosphoric acid is added to 30 milliliters of sulfate sulfur, 0.1 g of metallic chromium is used as carrier gas. The acid as reducing agent. Purified nitrogen is used as carrier gas. The reaction vessel of quartz is cooled ( $-1$  to  $-50^\circ C$ ). 0.5 - 1 g of the sample is dissolved in 30 milliliters of orthophosphoric acid in an  $N_2$  atmosphere.

ASSOCI

Card 1/2

...Soviet  
... follows: A.

Card 1/2  
... P. Bardina (Central Scientific Research  
... Ferrous Metallurgy Institute, Moscow)

FEDOROV, A.A.; SOKOLOVA, G.P.

Determination of aluminum (0.002 - 0.1 percent) in carbon and  
low alloy steels. Sbor. trud. TSNIICHH no.24:128-129 '62.

(MIRA 15:6)

(Steel--Analysis) (Aluminum--Analysis)

FEDOROV, A.A.; OZERSKAYA, F.A.

Photocolorimetric determination of cerium in medium-alloy and  
high-alloy steels. Sbor. trud. TSNIICHM no.24:130-132 '62.

(MIRA 15:6)

(Steel alloys--Analysis) (Cerium--Analysis)

FEDOROV, A.A.; LINKOVA, F.V.

Determination of tellurium in carbon steels, Sbor. trud.  
TSNIICHM no.24:147-149 '62. (MIRA 15:6)  
(Steel--Analysis) (Tellurium analysis)

S/776/62/000/024/001/007  
E021/E483

AUTHOR: Fedorov, A.A.

TITLE: Determination of phosphorus (0.05 to 0.5%) in metallic niobium and ferro-niobium

SOURCE: Moscow, Tsentral'nyy nauchno-issledovatel'skiy institut chernoy metallurgii. Sbornik trudov. no.24. 1962.  
Novyye metody ispytaniy metallov. 150-163

TEXT: A new method of determining small (0.05 to 0.5%) quantities of phosphorus in niobium and ferro-niobium is described. Although more accurate than those developed in the past, the method is relatively simple - one determination requiring 1.5 to 2 hours as compared with 2 to 3 days required by a method developed by MIS. The new method is based on the formation of yellow phosphoromolybdic hetero-polyacid  $H_3[P(Mo_3O_{10})_4] \cdot nH_2O$  and its subsequent reduction in an acid medium by divalent Fe (in the presence of sulphurous acid) to a blue compound. The acidity of the solution in which the blue compound is formed is such that the silicomolybdic and arsenous-molybdic hetero-polyacids are destroyed; this makes it possible to determine P in the presence of both Si and As. In the first stage of the analysis a weighed quantity

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Determination of phosphorous ...

S/776/62/000/024/001/007  
EO21/E483

of the material is dissolved in a  $\text{HNO}_3/\text{HF}$  mixture. The lower valency P compounds are oxidized to orthophosphoric acid by potassium permanganate, the excess of the latter being reduced by sodium nitrite. To separate P from Fe and Nb (the latter forming a complex with HF) it is precipitated as phospho-molybdate which is then dissolved in an ammonia solution containing tartaric and boric acids; tartaric acid holds in solution traces of Nb trapped in the phospho-molybdate precipitate, and boric acid combines with small quantities of the fluorine ions, also co-precipitated with phospho-molybdate, to form the  $\text{HBF}_4$  complex. Further determination of phosphorous is carried out by photo-colorimetry according to the reaction described above. The accuracy of the method, suitable for use on materials with high Nb contents, has been checked by a radiometric method using the  $\text{P}^{32}$  isotope. The new method has been adopted at TsNIChM and at several metallurgical plants as a standard analytical technique. There are 1 figure and 5 tables. ✓

Card 2/2



FEDOROV, A.A.; TIKHOMIROVA, O.F.; STREBULAYEVA, Ye.N.; CHERENOVA, O.I.

Determination of silicon in ferroniobium, niobium pentoxide,  
and in nickel-niobium alloys. Sbor. trud. TSNIICHM no.24:  
164-167 '62. (MIRA 15:6)  
(Niobium oxide--Analysis) (Niobium alloys--Analysis)  
(Silicon--Analysis)

FEDOROV, A.A.; LINKOVA, F.V.

Determination of aluminum oxide in aluminum metal. Sbor. trud.  
TSNIICHM no.24:172-178 '62. (MIRA 15:6)  
(Aluminum--Analysis) (Aluminum oxide--Analysis)

FEDOROV, A.A.; BUYANOV, N.V.; LINKOVA, F.V.; SUKHOVA, N.P.

Spectrochemical determination of hafnium (0.5 - 90 percent)  
in zirconium-hafnium and zirconium-titanium-hafnium alloys.  
Sbor. trud. TSNIICM no.24:188-190 '62. (MIRA 15:6)  
(Zirconium-hafnium alloys--Spectra) (Hafnium--Spectra)

FEDOROV, A.A.; SERGEYEV, V.

"Some methods of analysis used in ferroalloy plants" by M.V.Babaev.  
Reviewed by A.A.Fedorov and V.Sergeev. Zav.lab. 28 no.11:1403-  
1404 '62. (MIRA 15:11)

1. Nachal'nik Tsentral'noy khimicheskoy laboratorii Zaporozhskogo  
zavoda ferrosplavov (for Sergeyev).  
(Iron alloys) (Metallurgical analysis) (Babaev, M.V.)

FEDOROV, A.A.; OZERSKAYA, F.A.; STREBULAYEVA, Ye.N.

Trilonometric determination of calcium oxide in slags using  
fluorescein-complexon. Zav.lab. 29 no.7:794 '63. (MIRA 16:8)

1. Tsentral'nyy nauchno-issledovatel'skiy institut chernoy  
metallurgii im. I.P.Bardina.

(Calcium oxide) (Acetic acid) (Slag)

FEDOROV, A.A.; SOKOLOVA, G.P.

Determining aluminum (0.1 - 5 % in certain steels, alloys, and  
metals. Sbor.trud. TSNIICHM no.31:162-169 '63. (MIRA 16:7)  
(Metals--Analysis) (Aluminum--Analysis)

FEDOROV, A.A.; OZERSKAYA, F.A.; STREBULAYEVA, Ye.N.

Using fluorexon as indicator in the trilonometric analysis of slags.  
Sbor.trud. TSNIICHM no.31:170-172 '63. (MIRA 16:7)  
(Fluorexon) (Slag--Analysis)

FEDOROV, A.A.; SOKOLOVA, G.P.

Determining phosphorus in metal chromium, ferrochromium, and  
chromite ores. Sbor.trud. TSNIICHM no.31:175-179 '63. (MIRA 16:7)  
(Chromium--Analysis) (Iron-chromium alloys--Analysis)  
(Phosphorus--Analysis)



FEDOROV, A.A.; OZERSKAYA, F.A.

Trilonometric determination of aluminum oxide in slags with the  
use of a xylenol orange indicator. Sbor.trud. TSNIICHM no.31:  
195-196 '63 (MIRA 16:7)  
(Aluminum oxide--Analysis)

FEDOROV, A.A.; OZERSKAYA, F.A.; LINKOVA, F.V.

Determining micro- and macroquantities of rare-earth elements. Sbor.-  
trud. TSNIICHM no.31:197-199 '63. (MIRA 16:7)  
(Rare-earth metals—Analysis)

L 14979-65 EWT(m)/EPF(n)-2/EPA(bb)-2/EPF(b) Pu-4 ASD(a)-5/AFWL/SSD/AEDC(b)/  
 ASD(m)-3/AFIC(p)/RAEM(1)/ESD(gs)/ESD(t) JD/KW/JG/MLK  
 ACCESSION NR: AT4048093 S/0000/64/000/000/0017/0018

AUTHOR: Fedorov, A. A., Buyanov, N. V., Linkova, F. V., Sukhova, N. P. B

TITLE: Spectrochemical determination of hafnium in zirconium-hafnium and zirconium-titanium-hafnium alloys 27 27

SOURCE: <sup>27</sup>Spektral'nyye i khimicheskiye metody\* analiza materialov (Spectral and chemical methods of materials analysis); sbornik metodik. Moscow, Izd-vo Metallurgiya, 1964, 17-18

TOPIC TAGS: titanium alloy, spectroscopy, hafnium determination, hafnium alloy, zirconium alloy

ABSTRACT: The spectrochemical method used for the determination of hafnium in Zr-Hf and Zr-Ti-Hf alloys differs from the earlier methods, in that the alloy sample was dissolved in a mixture of acids, after which the hydroxides were precipitated by ammonia and calcined until the formation of oxides. Analysis was by a spectroscopic method. This method is suitable for determining 0.5 - 90% Hf; the relative error of the method for 0.5-2, 2-10, 10-40 and 40-90 % Hf is 10, 4, 2.5 and 2%, respectively. The sensitivity of the method is 0.1%. The preparation of the sample is described. The spectral

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L 14979-65  
ACCESSION NR: AT4048093

analysis was carried out on the ISP-22 spectrograph with a one-lens condenser and a 0.01 mm aperture width. The distance from the lens to the light source was 15 cm, and to the spectrograph aperture, 75 cm. The light source was a spark generator IG-2, C=0.01 microfarad, L=0.01 microhenry, spark gap 3 mm, I=1.7 amps, the distance between the carbon electrodes = 1.5 m. For the determination of 0.5-10% Hf, the pair of lines Hf 2861.70 - Zr 2856.06 Å were used; for 10-90% Hf, the pair Hf 2861.012 - Zr 2816.914 Å were used instead. The experimental data are tabulated. Orig. art. has: 1 table.

ASSOCIATION: Tsentral'nyy nauchno-issledovatel'skiy institut chernoy metallurgii im. I.P. Bardina (Central Scientific Research Institute of Ferrous Metallurgy)

SUBMITTED: 12Feb64

ENCL: 09

SUB CODE: MM, IC

NO REF SOV: 001

OTHER: 000

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1.  $\frac{d(\log I)}{d(\log I_0)} = \frac{d(\log I)}{d(\log I_0)} = \frac{d(\log I)}{d(\log I_0)}$

ACCESSION NR: AT6012933

UR/2776/64/000/037/0033/0046

AUTHOR: Fedorov, A.A.

1. A colorimetric method of determining tungsten (W) 5% in the alloy chromium-tungsten, chromium-tungsten, iron-tungsten, and tungsten.

1. Tungsten determination: tungsten alloy and its analysis.

**CIA-RDP86-00513R000412610018-8**

**CIA-RDP86-00513R000412610018-8"**

L 3211-66 EWT(m)/EWP(t)/EWP(b) IJP(c) JD  
ACCESSION NR: AT5012932

UR/2776/64/000/037/0025/0032 //

AUTHOR: Fedorov, A.A.

TITLE: Determination of microquantities of phosphorus in iron metal, iron ores, and nickel metal

SOURCE: Moscow. Tsentral'nyy nauchno-issledovatel'skiy institut chernoy metallurgii. Sbornik trudov, no. 37, 1964. Novyye metody ispytaniy metallov; khimicheskiy kontrol' v metallurgii (New methods in the analysis of metals; chemical control in metallurgy), 25-32

TOPIC TAGS: phosphorus determination, phosphorus admixture, iron analysis, nickel analysis, iron ore analysis, phosphorus precipitation

ABSTRACT: An effective method of separating phosphorus from iron and nickel is the precipitation of phosphorus with a collector of the composition  $(\text{MnO}_2)_x(\text{Fe}_2\text{O}_3)_y(\text{H}_2\text{O})$  from dilute nitric acid solution. The precipitate is formed by the reaction of manganous irons with potassium permanganate in the presence of ferric ions; at the same time, the permanganate oxidizes the compounds of trivalent phosphorus to orthophosphoric acid. It was found that boiling of the solution (5 min) promotes a complete trapping of phosphorus by the chosen collector. The collector most suitable for the coprecipitation of phosphate ions over the widest acidity range (2.5 to 27%  $\text{HNO}_3$  by vol.) is formed by the reaction

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L 3211-66

ACCESSION NR: AT5012932

between 0.4 g  $Mn^{2+}$ , 0.7 g  $Fe^{3+}$ , and 2 g of  $KMnO_4$  in 300 ml of solution. The collector contains up to 0.3 g Fe and up to 1.2 g Mn. These optimum conditions can be somewhat modified when microquantities of phosphorus are determined. Although the collector is a compound of variable composition, the concentration of the elements entering into the composition of the precipitates lies within fairly narrow limits. Analytical procedures for the determination of 0.0004-0.012% phosphorus in iron metal, 0.0004-0.012% phosphorus in iron ores, and 0.0002-0.006% phosphorus in nickel metal, based on the above method, are described in detail. Orig. art. has: 4 figures and 3 tables.

ASSOCIATION: Tsentral'nyy nauchno-issledovatel'skiy institut chernoy metallurgii, Moscow (Central Scientific Research Institute for Ferrous Metallurgy)

SUBMITTED: 00

ENCL: 00

SUB CODE: IC, MM

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OTHER: 002

PC  
Card 2/2



EXT(a)/FKA(d)/EXP(t)/EXP(z)/EXP(b) EW  
AB5016095 20/4/8 12 100 0075 0000 0000 0000  
140, 7

AUTHOR: Fedorov, A. A., Sorokina, N. N.

TITLE: Spectrochemical determination of samarium, gadolinium, dysprosium, erbium, and scandium (0.01-0.6%) in steels and alloys

Source: Zhurnal analiticheskoy khimii, v. 20, no. 6, 1965, 745-747

Subject: I.A.G.S. samarium, gadolinium, dysprosium, erbium, scandium, chromium steel, cobalt steel, steel analysis, rare earths, spectroscopy

A spectrochemical method was developed for the determination of samarium, gadolinium, dysprosium, erbium, and scandium in steels and alloys. The method is based on the use of a high-resolution spectrograph with a quartz prism monochromator and a photomultiplier tube.

Subject: SPECTROSCOPY

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L 500-65

ACCESSION NR: AP5016096

$\pm 3 \times 10^{-3}$  to  $\pm 3 \times 10^{-2}$  %, respectively. The method was thus shown to be completely  
The authors express their appreciation to Z. M. Skolova, A. M. Golubeva,  
and others who participated in this work.

REF SOV: 001

OTHER: 000

Card

2/2 *UP*

FEDOROV, A.A. (Shchelkovo, Moskovskoy oblasti, ul. Pushkina, 16, kv.4)

Osteosynthesis of the clavicle with capron thread. Vest. khir.  
92 no.6:104 Je '64. (MIRA 18:5)

1. Iz khirurgicheskogo otdeleniya (zav. - zasluzhennyy vrach  
RSFSR A.A. Fedorov) Shchelkovskoy gorodskoy bol'nitsy (glavnyy  
vrach - A.F. Pavlova).

FEDOROV, A. A., Engr.      Card. Tech. Sci.

Dissertation: "Fundamentals of Technical Exploitation of the Electrical Equipment in Industrial Enterprises." Moscow Order of Lenin Power Engineering Institute V. M. Molotov, 20 Jun 47.

SO: Vechernyaya Moskva, Jun, 1947 (Project #17836)

GUSEV, S.A., inzh.; ZHUKHOVITSKIY, B.Ya., kand.tekhn.nauk; ZARIN, D.D.,  
kand.tekhn.nauk; IVANOV-SMOLENSKIY, A.V., kand.tekhn.nauk;  
KNYAZEVSKIY, B.A., kand.tekhn.nauk; KUZNETSOV, A.I., inzh.;  
KOZIS, V.L., kand.tekhn.nauk; KORYTIN, A.A., inzh.; LASHKOV,  
F.P., inzh.; L'VOV, Ye.L., kand.tekhn.nauk; MELESHKINA, L.P.,  
kand.tekhn.nauk; NEKRASOVA, N.M., kand.tekhn.nauk; NIKULIN,  
N.V., kand.tekhn.nauk; POLEVOY, V.A., kand.tekhnicheskikh  
nauk; RAZEVIQ, D.V., kand.tekhn.nauk; ROZANOV, G.M., kand.tekhn.  
nauk; RUMSHISKIY, L.Z., kand.fiz.-matem.nauk; SVISTOV, N.K.,  
kand.tekhn.nauk; SIROTINSKIY, Ye.L., kand.tekhn.nauk; SOKOLOV,  
M.M., kand.tekhn.nauk; TALITSKIY, A.V., prof.; TREMBACH, V.V.,  
inzh.; FEDOROV, A.A., kand.tekhn.nauk; GRUDINSKIY, P.G., prof.;  
PRYTKOV, V.T., kand.tekhn.nauk; CHILIKIN, M.G., prof., glavnyy  
red.; GOLOVAN, A.T., prof., red.; PETROV, G.N., prof., red.;  
FEDOSEYEV, A.M., prof., red.; ANTIK, I.V., red.; SKVORTSOV, I.M.,  
tekhn.red.

[Handbook for electric engineering] Elektrotekhnicheskii spravochnik.  
Moskva, Gos.energ.ind-vo, 1952. 640 p. (MIRA 13:2)

1. Prepodavateli Moskovskogo energeticheskogo instituta imeni V.M.  
Molotova (for all except Antik, Skvortsov).  
(Electric engineering)

PATSIORA, P.P., dotsent, kandidat tekhnicheskikh nauk; MAKAROVICHKIN, I.M.,  
retsensent; MADBAKH, M.P., retsensent; FEDOROV, A.A., redaktor;  
VOLKHOVER, R.S., tekhnicheskii redaktor

[Electric equipment in the forest industries] Elektrooborudovanie  
na lesorazrabotkakh. Moskva, Goslesbumizdat, 1953. 347 p. (MLRA 7:9)  
(Lumbering--Machinery) (Electricity in forestry)

SMO3

FEDOROV, A.A., redaktor; KUZNETSOV, P.V., redaktor; VORONTSOV, F.F., redaktor; SAPAROVA, A.L., redaktor; LARIONOV, G.Ye., tekhnicheskiy redaktor.

[Reference book for the electrician in industrial plants] Spravochnik elektriika promyshlennykh predpriatii. Pod obshchei red. A.A.Fedorova i P.V.Kuznetsova. Moskva, Gos. energ. izd-vo, 1954. 1040 p.  
(Electric engineering) (MLRA 7:10)

FEDOROV, A.A., dotsent, kandidat tekhnicheskikh nauk; KNYAZEVSKIY, B.A.,  
dotsent, kandidat tekhnicheskikh nauk.

Book on the electric power supply of industrial enterprises.  
Elektrichestvo no.6:85-86 Je '54. (MLRA 7:7)  
(Electric power distribution)



FEDOROV, Anatoliy Anatol'yevich; VERTEBNYY, V.I., redaktor; LARIONOV, G.Ye.,  
tekhnicheskly redaktor.

[Supplying industrial establishments with electricity] Elektrosnab-  
zhenie promyshlennykh predpriyatii. Izd.2-oe, perer. 1 dop. Moskva,  
Gos.energ. izd-vo, 1956. 463 p. (MLRA 9:5)  
(Electric power)

AUTHOR: Fedorov, A.A. (Candidate of Technical Sciences) 94-2-2/27

TITLE: On the use of 20 kV in industry (O primeneni v promyshlennosti napryazheniya 20 kV)

PERIODICAL: Promyshlennaya Energetika, 1958, Vol.13. No.2. pp.5-6 (USSR)

ABSTRACT: This short article first presents the arguments against voltages of 10 kV or 30 kV and in favour of 20 kV for supply to industry. These are, that the transmission lines are cheap and simple, conductor copper is economised, 20 kV cables cost little more than 10 kV cables, and line conductors can be of steel. Also, 20 kV is convenient for supply to large towns and agricultural districts. The economy of capital resources by using 20 kV is argued from rough calculations of costs for power systems near Moscow and in an agricultural district. In both cases, the mean consumption of non-ferrous metal for the 20 kV scheme was only half that for the 10 kV scheme, and the power losses were 2 - 2.5 times less. Figures for capital and running costs and consumption of non-ferrous metal at different supply voltages are tabulated for various industries. There is 1 table.

ASSOCIATION: Moscow Power Institute. (Moskovskiy Energeticheskiy Institut).

AVAILABLE: Library of Congress.

Card 1/1      1. Electrical systems-Design    2. Electrical engineering-USSR  
                 3. Electrical equipment-Selection    4. Voltage-Selection

YERMILEV, A.A., inzh.; SEULIN, N.A., inzh.; CHIZHISHIN, P.L., inzh.; CHEPELE, Yu.M., inzh.; MUSATOV, T.P., inzh.; FEDOREV, A.A., kand. tekhn. nauk;  
YAROSHETSKIY, L.M., inzh.; GOL'DENBLAT, B.I., inzh.; KUDRYASHOV, S.A., inzh.; ZAKHAROV, N.N., inzh.; SHCHUKIN, B.D., inzh.

Improving planning of industrial power supply. Prom. energ. 13 no. 7:  
18-29 J1 '58. (MIRA 11:10)

1. Tyazhpromelektroproyekt. (for Yermilev). 2. Zhamproyektas, g. Kaunas (for Chepele). 3. Denbassenerge (for Musatov). 4. Moskovskiy energeticheskiy institut (for Fedorev). 5. Uzgipovedkhoz. g. Tashkent (for Yaroshetskiy). 6. Proyektnyy institut Ministerstva stroitel'stva USSR, Odessa (for Gol'denblat). 7. Elektroproyekt, g. Kuybyshev (for Kudryashov). 8. Gosradioelektronika (for Zakharov). 9. Elektroproyekt, g. Kuybyshev (for Shchukin).

(Electric power)

FEDOROV, Anatoliy Anatol'yevich, dots.

[Collection of problems for courses on the design of industrial electric power distribution systems] Sbornik zadani na kursovoe proektirovanie po elektrosnabzheniiu promyshlennykh predpriiati. Moskva, M-vd vysshego i srednego spetsial'nogo obrazovaniia RSFSR, 1959. 101 p. (MIRA 15:1)  
(Electric power distribution)

FEDOROV, A.A., kand.tekhn.nauk; GUREYEV, I.A., inzh.

Some information pertaining to selection and checking of bus  
bars according to the mechanical resonance in the leads. Prom.  
energ. 15 no.4:18-22 Ap '60. (MIRA 13:6)  
(Electricity--Distribution) (Bus conductors (Electricity))

FEDOROV, A.A.

Calculation of losses in triple-wound power transformers. Prom.  
energ. 15 no.9:5-7 S '60. (MIRA 13:10)  
(Electric transformers)

FEDOROV, Anatoliy Anatoliyevich. Prinimali uchastiye: AFANAS'YEV, N.P.;  
KAMENEVA, V.V., inzh. GRUDINSKIY, P.G., prof., retsenzent;  
SERBINOVSKIY, G.V., dotsent, retsenzent; BOCHAROV, V.I., dotsent,  
kand.tekhn.nauk, retsenzent; VORONIN, K.P., tekhn.red.

[Electric-power supply of industrial enterprises] Elektrosnabzhe-  
nie promyshlennykh predpriyatii. Izd.3., perer. i dop. Moskva,  
Gos.energ.izd-vo, 1961. 742 p. (MIRA 14:4)

1. Frunzenskiy politekhnicheskii institut (for Bocharov).  
(Electric power distribution)

FEDOROV, A. A.

BACHURIN, N.I., inzh.; VOLKOV, S.S., inzh.; GORODETSKIY, S.S., prof., doktor tekhn. nauk; GUSEV, S.A., dotsent, kand. tekhn. nauk; ZHUKHOVITSKIY, B.Ya., dots., kand. tekhn. nauk; IVANOV-SMOLENSKIY, A.V., dots., kand. tekhn. nauk; KIFER, I.I., dots., kand. tekhn. nauk; KORYTIN, A.A., starshiy pre-podavatel'; KULIKOV, F.V., dots.; NIKULIN, N.V., dots., kand. tekhn. nauk; PODMAR'KOV, A.N., dots.; PRIVEZENTSEV, V.A., prof., doktor tekhn. nauk; RUMSHINSKIY, L.A., dots., kand. fiz.-mat. nauk; SOBOLEV, V.D., dots., kand. tekhn. nauk; URLAPOVA, M.N., inzh.; TIKHOMIROV, P.M., dots., kand. tekhn. nauk; FEDOROV, A.A., dots., kand. tekhn. nauk; CHUNIKHIN, A.A., dots., kand. tekhn. nauk; CHILIKIN, M.G., prof., glav. red.; GOLOVAN, A.T., prof., red.; GRUDINSKIY, P.G., prof., red.; PETROV, G.N., prof., doktor tekhn. nauk, red.; FEDOSEYEV, A.M., prof., red.; ANTIK, I.V., inzh., red.; BORUNOV, N.I., tekhn. red.

[Electrical engineering handbook] Elektrotekhnicheskii spravochnik. 3., perer. i dop. izd. Pod obshechi red. A.T. Golovana i dr. Moskva, Gosenergoizdat. Vol.1. 1962. 732 p. (MIRA 15:10)

1. Moskovskiy energeticheskiy institut (for Golovan, Grudinskiy, Petrov, Fedoseyev, Chilikin, Antik).  
(Electric engineering—Handbooks, manuals, etc.)



FEDOROV, A.A.

Successful treatment of gangrenous stomatitis with novocaine  
block and antibiotics. Khirurgia Supplement:56 '57. (MIRA 11:4)

1. Iz Dzhankoysskoy rayonnoy bol'nitsy Krymskoy oblasti.  
(STOMATITIS) (NOVOCAINE) (ANTIBIOTICS)

PICHUGIN, A.A., dotsent, kand.tekhn.nauk; BOCHAROV, Ye.V., inzh.. Prini-  
mali uchastiye: KUZ'MINSKIY, A.G., inzh.; VORONKINA, M.A., inzh.;  
FEDOROV, A.A., inzh.; BELOUSOV, M.A., inzh.ekonomist; PROSVIRNIN,  
G.V., inzh.; KNIGINA, G.I., dotsent, kand.tekhn.nauk; LESNIKOV,  
V.V., dotsent, kand.tekhn.nauk; SIDOROV, A.K., dotsent, kand.  
arkhitektury; KARTASHOV, A.A., arkhitektor; BARITSKIY, F.F., dotsent,  
kand.tekhn.nauk; KULISHOV, D.A., prof.; ZDESENKO, G.M., kand.tekhn.  
nauk; ALEKSANDRENKO, A.I., dotsent, kand.tekhn.nauk; STREL'NIKOV,  
G.Ye., kand.tekhn.nauk; VANYEV, V.A., assistant; CHEREPKO, P.A.,  
dotsent. SUSHINSKIY, A.F., inzh., dotsent; MEN'SHIKOV, P.N.,  
red.; SUBBOTINA, G.M., tekhn.red.

[Manual for rural builders] Spravochnik proizvoditel'ia rabot  
sel'skokhoziaistvennogo stroitel'stva. Novosibirsk, Novosibirskoe  
knizhnoe izd-vo. Vol.1. 1959. 673 p. Vol.2. 1959. 677-1191 p.  
(MIRA 13:2)

(Farm buildings)

FEDOROV, A.A.

Effect of perforations on the external pressure resistance of  
pipes. Izv.vys.ucheb.zav.; neft' i gaz 1 no.10:107-115 '58.  
(MIRA 12:4)

1. L'vovskiy politekhnicheskii institut.  
(Pipe)

FEDOROV, A. A.: Master Tech Sci (diss) -- "The effect of perforation on the resistance of pipes to external pressure". L'vov, 1959. 19 pp (Min Higher Educ Ukr SSR, L'vov Polytech Inst), 150 copies (KL, No 17, 1959, 109)

3(5)

SOV/132-59-8-13/18

AUTHORS: Ochkur, A.P., Sokolov, M.M., and Fedorov, A.A.

TITLE: On the Interpretation of Diagrams of Gamma-Gamma  
Core Sampling

PERIODICAL: Razvedka i okhrana nedr, 1959, Nr 8, pp 52-53 (USSR)

ABSTRACT: In the diagram obtained from gamma-gamma core  
sampling, anomalies caused by caverns in the bore-  
hole are similar to those caused by rocks and mine-  
rals of low density. A correct interpretation of  
such a diagram can be made, according to the authors,  
by comparing the diagrams obtained with sounds of  
a different length. If the thus obtained values of  
density coincide on a graduated graph of a gamma-  
gamma survey, the anomaly is caused by the change  
in density of a rock or mineral. The variation

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SOV/132-59-8-13/18

- On the Interpretation of Diagrams of Gamma-Gamma Core Sampling  
of the compared curves indicates that the bore-hole  
crosses a cavity. There are 2 graphs and 1 table.

ASSOCIATION: VITR

Card 2/2

MIKOV, Dmitriy Stepanovich; FEDOROV, Aleksandr Anatol'yevich,  
ANDRIFYEV, Vsevolod Aleksandrovich; UDODOVA, Ol'ga  
Vladimirovna; IVANCHURA, Lev Ivanovich

[Geophysical methods of prospecting] Razvedochnaia geo-  
fizika. [By] D.S.Mikov i dr. Tomsk, Izd-vo Tomskogo univ.,  
1961. 340 p. (MIRA 18:5)

FEDOROV, A.A.; LINKOVA, F.V.

Determination of aluminum oxide in metallic aluminum by hydro-  
chlorination. Zhur.anal.khim. 17 no.1:53-55 Ja-F '62.  
(MIRA 15:2)

1. I.P.Bardin Central Scientific-Research Institute of Ferrous  
Metal Industry, Moscow.

(Aluminum oxide)



SOKOLOV, M.M.; KLEVTSOV, P.P.; FEDOROV, A.A.; KHITYEV, P.P.

Separate determination of uranium, thorium, and potassium in natural occurrence using a scintillation gamma-spectrometer. Vop.rud.geofiz. no.4:48-57 '64. (MIRA 18:1)

L 47085-66 EWT(m)/EWP(t)/ETI IJP(c) JD/JG  
 ACC NR: AT6030278 SOURCE CODE: UR/2776/66/000/049/0084/0085

AUTHOR: Sorokina, N. N.; Fedorov, A. A.; Colubeva, V. M.; Chernyakhovskaya, P. V.

ORG: none

TITLE: Chemical-spectroscopic method of determining the samarium content in 1Kh13N16B and 12Kh1MF steels, and KhN77YuR alloy

SOURCE: Moscow. Tsentral'nyy nauchno-issledovatel'skiy institut chernoy metallurgii. Sbornik trudov, no. 49, 1966. Novyye metody ispytaniy metallov; khimicheskiy kontrol' v metallurgii (New methods in the analysis of metals; chemical control in metallurgy), 84-85

TOPIC TAGS: samarium, spectroscopy, metal chemical analysis

ABSTRACT: A chemical-spectroscopic method of determining the samarium content in 1Kh13N16B, and 12Kh1MF steels, and KhN77TYuR alloy has been developed. Samarium is isolated by precipitation in the form of fluoride, which is subjected to spectroscopic analysis. With this method, samarium contents of 0.001—0.1% can be determined with respective errors of ±0.0003—0.008%. Orig. art. has: 1 table. [TD]

SUB CODE: 11, 13/ SUBM DATE: none/ ORIG REF: 001/

Card 1/1 *mt*

BRYLEV, G.B.; VASIL'CHENKO, I.V.; TSEBAYA, V.I.; PRIZHON, A.A.

Combined radar and aerological observations in the lower 1.5-km.  
atmospheric layer. Trudy GGO no.173:76-90 '65.

(MIRA 18:3)

TURKOV, G.A.; FEDOROV, A.A.

Development of the machinery industry in the Far East. Bui. tekhn.  
ekon. inform. Gos. nauch.-issl. inst. nauch. i tekhn. inform. 18 no. 1:8-10  
Ja '65. (MIRA 18:4)

ALEKSEYEVA, G.Ye., kand. tekhn. nauk, dots.; MELESHKINA, L.P., dots., kand. tekhn. nauk; BALUYEV, V.K., inzh.; BAMDAS, A.M., prof., doktor tekhn. nauk; VENIKOV, V.A., prof., doktor tekhn. nauk; YEZHKOVA, V.V., kand. tekhn. nauk; ANISIMOVA, N.D., dots., kand. tekhn. nauk; GANTMAN, S.A., kand. khim. nauk; GLAZUNOV, A.A., dots., kand. tekhn. nauk; GOGUA, L.K., inzh.; GREBENNICHENKO, V.T., inzh.; GRUDINSKIY, P.G., prof.; GORFINKEL', Ya.M., inzh.; ZVEZDIN, A.L., inzh.; KAZANOVICH, G.Ya., inzh.; KNYAZEVSKIY, B.A., dots., kand. tekhn. nauk; KOSAREV, G.V., dots., kand. tekhn. nauk; MESSERMAN, S.M., kand. tekhn. nauk, dots.; KOKHAN, N.D., inzh.; KUVAYEVA, A.P., dots., kand. tekhn. nauk; SOKOLOV, M.M., dots., kand. tekhn. nauk; LASHKOV, F.P., dots., kand. tekhn. nauk; LAZIN, A.I., inzh.; YUDIN, F.I., inzh.; LIVSHITS, A.L., kand. tekhn. nauk; METEL'TSIN, P.G., inzh.; NEKRASOVA, N.M., dots., kand. tekhn. nauk; OL'SHANSKIY, N.A., dots., kand. tekhn. nauk; POLEVAYA, I.V., dots., kand. tekhn. nauk; POLEVOY, V.A., dots., kand. tekhn. nauk [deceased]; RAZEVIK, D.V., prof., doktor tekhn. nauk; RAKOVICH, I.I., inzh.; SOLDATKINA, L.A., dots., kand. tekhn. nauk; TREMBACH, V.V., dots., kand. tekhn. nauk; FEDOROV, A.A., prof., kand. tekhn. nauk; FINGER, L.M., inzh.; CHILIKIN, M.G., prof., doktor tekhn. nauk, glav. red.; ANTIK, I.V., inzh., red. GOLOVAN, A.T., prof., red.; PETROV, G.N., prof., red.; FEDOSEYEV, A.M., prof., red.

(Continued on next card)

ALEKSEYEVA, G.Ye.— (continued). Card 2.

[Electrical engineering manual] Elektrotekhnicheskii  
spravochnik. Pod obshchei red. A.T. Golovana i dr. Moskva,  
Energia. Vol.2. 1964. 758 p. (MIRA 17:12)

1. ~~Moscow~~. Energeticheskii institut. 2. Moskovskiy energo-  
ticheskii institut (for Golovan, Grudinskiy, Petrov,  
Fedoseyev, Chilikin, Venikov). 3. Chlen-korrespondent AN  
SSR (for Petrov).

FEDOROV, A.A.

Give more attention to buckwheat. Zemledelie 23 no.12:26-27 D  
'61. (MIRA 15:1)

1. Glavnyy agronom po semenovodstvu zernovykh kul'tur Mogilevskogo  
oblastnogo upravleniya sel'skogo khozyaystva.  
(Buckwheat)

ACC NR: AP7001420

(A)

SOURCE CODE: UR/0413/66/000/021/0134/0134

INVENTOR: Fedorov, A. F.

ORG: none

TITLE: A method for determining the radial explosive actions of the exploding charge of an electric detonator. Class 42, No. 188076

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 21, 1966, 134

TOPIC TAGS: detonation, electric detonator, explosive, explosive charge

ABSTRACT: This Author Certificate presents a method for determining the radial explosive actions of the exploding charge of an electric detonator. Steel washers (plates) 1 mm thick and about 30 mm in the internal diameter (equal to the outside diameter of the electric detonator shell) are placed on the electric detonator along the entire length of the charge (see Fig. 1). A space of 1.6 mm is left between successive washers. The electric detonator is then exploded, and the power of each detonated zone is determined from the increase in the internal diameters of washers.

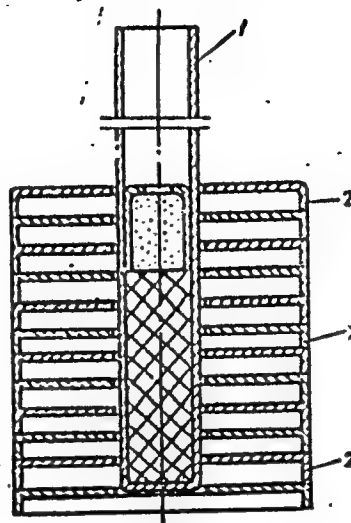
Card 1/2

UDC: 531.78.662.423



ACC NR: AF7001420

Fig. 1. 1 - shell; 2 - washer plates



Orig. art. has: 1 figure.

SUB CODE: 19, 13/ SUBM DATE: 05Sep63

Card 2/2

Editors: FEDOROV, AL. A.; GAMMERMAN, A. F.; GUSYNIN, I. A.; IL'IN, M. M.; NEKRASOVA, V. L.; NIKITIN, A. A.; Responsible editor: SHISHKIN, B. K.

Poisonous Plants of Meadows and Pastures, Botanical Institute imeni V. L. Komarov. Moscow-Leningrad; 1950, 527 pp.

Book W-22202, 7 Apr 52

FEDOROV, Al. A.

Botany-Curiosa and Miscellany, Plants, Flowering of

Cauliflory in Erica arborea L. Al. A. Fedorov. Bot. zhur. 37 No. 3 1952.

Botanicheskiy Institut im. V.L. Komarova, Akademii Nauk SSSR Recd. March 15, 1952

SO: Monthly List of Russian Accessions, Library of Congress, September <sup>2</sup>195~~6~~, Uncl.

1. FEDOROV, AL.A.
2. USSR (600)
4. Roots (Botany)
7. Natural "spot" seeding and self-grafting of roots in dandelions (Taraxacum).  
Bot.zhur. 37 no. 6. 1952

9. Monthly List of Russian Accessions, Library of Congress, March, 1953. Unclassified.

SHARAPOV, N.I.; FEDOROV, A.I., doktor biologicheskikh nauk, professor,  
otvetstvennyy redaktor; LUKASHEVICH, L.A., redaktor; AROMS, R.A.,  
tekhnicheskiiy redaktor.

[Plant chemistry and climate] Khimizm rastenii i klimat. Moskva,  
Izd-vo Akademii nauk SSSR, 1954. 207 p. (MLRA 7:11)  
(Botanical chemistry) (Crops and climate)

FEDOROV, A.I.A.; FEDOROV, A.N.A.; BZAZADE, R.Ya.

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New and important Caucasian species of the genus Astragalus L.  
Bot.mat.Gerb. no.16:221-232 '54. (MLRA 8:9)  
(Astragalus)

FEDOROV, A.I.A.

New species of spurge (Euphorbia L.) from Kopet Dagh. Bot.nat.  
Gerb. 16:241-244 '54.

(MIRA 8:9)

(Spurge)

FEDOROV, A.I.A.

Relation and interdependence of some anomalous structures in  
plants (for example: *Campanula medium* L.) Bot.zhur. 39 no.4:  
568-576 J1-Ag '54. (MLRA 7:10)

1. Botanicheskiy institut im. V.I.Komarova Akademii nauk SSSR,  
Leningrad.  
(Botany--Anatomy)



FEDOROV, A.I., KIRPICHNIKOV, M.E.; ARTYUSHENKO, Z.T.; BARANOV, P.A.,  
redaktor; SHCHERBINA, T.S., redaktor izdatel'stva; KIRNARSKAYA, A.A.,  
tekhnicheskii redaktor

[Atlas of descriptive morphology of the higher plants; leaves]  
Atlas po opisatel'noi morfologii vysshikh rastenii; list. Pod  
obshchey red. P.A.Baranova. Moskva, Izd-vo Akademii nauk SSSR,  
1956. 301 p. ---[Models for the determination of principal laminar  
forms] Shablony dlia opredeleniia osnovnykh form plastinki lista.  
6 l. (in pocket) (MIRA 9:9)

1. Chlen-korrespondent Akademii nauk SSSR (for Baranov)  
(Leaves--Morphology)

FEDOROV, A.I.A. (Leningrad)

Tasks and outlook for the development of botany in the sixth  
five-year plan. Bot.zhur. 41 no.3:313-317 Mr '56. (MLRA 9:8)  
(Botany)

FEDOROV, A.I.A.

Some anomalies in tulips and their importance in studying the  
morphological structure of Tulipa. Bot.shur. 41 no.5:681-689  
My '56. (MLRA 10:7)

1. Botanicheskiy institut in. V.L. Komarova Akademii nauk SSSR,  
Leningrad.

(Tulips) (Abnormalities (Plants))

FEDOROV, A.I.A.

Interesting case of anomaly in the fruit structure of a sweet and trefoliate orange hybrid. Bot. zhur.41 no.10:1474-1478 0 '56.

(MIRA 10:1)

1. Botanicheskiy institut imeni V.L. Komarova Akademii nauk SSSR, Leningrad.

(Orange) (Fruit--Morphology)